

ADDITIONS TO THE FLORA OF NAGS HEAD WOODS
(DARE COUNTY, NORTH CAROLINA)
AND THE OUTER BANKS OF NORTH CAROLINA

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ABSTRACT

Including an extensive system of dunes, interdunal ponds, and wetlands, the Nags Head Woods Ecological Preserve (Dare Co., North Carolina) comprises one of the best remaining examples of mid-Atlantic maritime deciduous forests. This study presents additions to the flora of the preserve and the larger Outer Banks, based on recent collections. Thirty-four taxa have not previously been reported for the preserve, five have not been reported for the Outer Banks, and two have been rediscovered.

RESUMEN

La Nags Head Woods Ecological Preserve (Dare Co., North Carolina), que incluye un sistema extensivo de dunas, lagunas interdunares, y humedales, comprende uno de los mejores ejemplos restantes de bosques caducifolios marítimos atlánticos. Este estudio presenta adiciones a la flora de la reserva y los mayores Outer Banks, basado en colecciones recientes. Treinta y cuatro taxa no habían sido citados previamente de la reserva, cinco no habían sido citados de los Outer Banks, y dos han sido redescubiertos.

The Nags Head Woods Ecological Preserve (Kill Devil Hills, Dare Co.) comprises one of the best remaining examples of mid-Atlantic maritime deciduous forest (Schafale & Weakley 1990) and includes an extensive system of dunes, interdunal ponds, and wetlands. Recent progress toward a flora of the preserve provided a checklist of vouchered collections housed at the herbarium of the National Park Service Cape Hatteras National Seashore Unit (CAHA), Manteo, North Carolina (Krings 2002). Although not listed in either the *Index Herbariorum* (Holmgren et al. 1990) or Aulbach-Smith et al. (1986), CAHA constitutes a valuable resource of North Carolina barrier island collections. The collections from the Nags Head Woods Ecological Preserve (NHWEP) housed at CAHA include material collected by various members of the Dunes of Dare Garden Club, McCaffrey, as well as Stalter and Lamont (1997). This study presents new additions to the flora of the preserve and the larger Outer Banks (sensu Stalter & Lamont 1997), resulting from recent collections by the author and preserve staff.

METHODS

The list was compiled based on field collections by the author and preserve

staff over the period of Mar 2001–Sept 2002. Specimens were critically studied and identified at the herbarium of North Carolina State University (NCSC).

RESULTS

Species at the NHWEP listed below include new additions to the flora, as well as species previously reported but not vouchered by Blonder and Stalter (1992) or Stalter and Lamont (1997). Asterisks preceding a scientific name indicate that taxon to be a new addition to the flora of NHWEP (i.e., not previously reported by Blonder and Stalter (1992) or not specifically reported for the preserve by Stalter and Lamont (1997)).

The list includes 89 species, 34 (38%) of which have not been previously reported for the preserve, and 5 (~6%) of which have not been reported for the Outer Banks (i.e., not listed in either Burk (1961), Blonder and Stalter (1992), or Stalter and Lamont (1997)).

Pteridophyta

ASPLENIACEAE

**Asplenium platyneuron* (L.) BSP., *Krings* 450 (NCSC)

OSMUNDACEAE

Osmunda cinnamomea L., *Krings* 534 (NCSC)
Osmunda regalis L. var. *spectabilis* (Willd.) A. Gray,
Krings 538 (NCSC)

Gymnospermae

CUPRESSACEAE

Juniperus virginiana L., *Krings* 373 (NCSC)

PINACEAE

Pinus palustris Mill., *Krings* 563 (NCSC)
Pinus taeda L., *Krings* 564 (NCSC)

TAXODIACEAE

Taxodium distichum (L.) Rich., *McCall* s.n. (NCSC)

Angiospermae

Monocotyledonae

CYPERACEAE

**Carex albolutescens* Schwein., *Krings* 554 (NCSC);
Krings 555 (NCSC)
Schoenoplectus americanus (Pers.) Volk ex Schinz.
& R. Keller, *Krings* 546 (NCSC)

JUNCACEAE

Juncus canadensis J. Gay, *Krings* 556 (NCSC);
Krings 560 (NCSC)
Juncus roemerianus Scheele, *Krings* 540 (NCSC)

LILIACEAE

**Hemerocallis fulva* (L.) L., *Krings* 451 (NCSC)

ORCHIDACEAE

Cypripedium acaule Aiton, *Krings* 471 (NCSC)

POACEAE

Arundinaria tecta Walt., *Krings* 541 (NCSC)
**Erianthus giganteus* (Walt.) Muhl., *Krings* 559 (NCSC)
Glyceria septentrionalis Hitchc., *Krings* 561 (NCSC)
Panicum amarum Elliott, *Krings* 558 (NCSC)
**Panicum scoparium* Lam., *Krings* 557 (NCSC)
Phragmites australis (Cav.) Trin. ex Steud., *Krings* 520 (NCSC)
**Setaria geniculata* P. Beauv., *Krings* 521 (NCSC)
**Setaria magna* Griseb., *Krings* 544 (NCSC)

SMILACACEAE

Smilax glauca Walter, *Krings* 465 (NCSC); *Krings* 487 (NCSC)
**Smilax smallii* Morong, *Krings* 525 (NCSC)

TYPHACEAE

Typha angustifolia L., *Krings* 549 (NCSC)

Dicotyledonae

ACERACEAE

Acer rubrum L., *Krings* 377 (NCSC)

ANACARDIACEAE

Rhus copallina L., *Krings* 514 (NCSC)

APIACEAE

Centella erecta (L.f.) Fern., *Krings* 562 (NCSC)

**Ptilimnium capillaceum* (Michx.) Raf. ex Ser.,
Krings 533 (NCSC)

AQUIFOLIACEAE

Ilex vomitoria Aiton, Krings 386 (NCSC)

ARALIACEAE

Aralia spinosa L., Krings 463 (NCSC)

ARISTOLOCHIACEAE

**Aristolochia serpentaria* L., Krings 517 (NCSC)

ASTERACEAE

**Achillea millefolium* L., Krings 543 (NCSC)
Carduus spinosissimus Walter, Krings 466 (NCSC)
**Chrysanthemum leucanthemum* L., Krings 452
(NCSC)
Eupatorium hyssopifolium L., Krings 522 (NCSC)
**Gaillardia pulchella* Foug., Krings 456 (NCSC)
Iva frutescens L., Krings 551 (NCSC)

BETULACEAE

Ostrya virginiana (P. Mill.) K. Koch., Krings 374
(NCSC)

BRASSICACEAE

**Cardamine hirsuta* L., Krings 389 (NCSC)
Lepidium virginicum L., Krings 530 (NCSC)

BIGNONIACEAE

Campsis radicans (L.) Seem., Krings 523 (NCSC)

CAPRIFOLIACEAE

Lonicera japonica Thunb. ex Murray, Krings 472
(NCSC)
Lonicera sempervirens L., Krings 535 (NCSC)

CELASTRACEAE

**Celastrus orbiculatus* Thunb., Krings 532 (NCSC)

CISTACEAE

**Helianthemum canadense* (L.) Michx., Krings 550
(NCSC)

CONVOLVULACEAE

Calystegia sepium (L.) R.Br., Krings 527 (NCSC)

CORNACEAE

**Cornus stricta* Lam., Krings 536 (NCSC)
Cornus florida L., Krings 486 (NCSC)

EUPHORBIACEAE

Cnidoscolus stimulosus (Michx.) Engelm. & A. Gray,
Krings 462 (NCSC)
**Tragia urens* L., Krings 515 (NCSC)

FABACEAE

**Desmodium nuttallii* (Schindler) Schubert,

Krings 512 (NCSC)

**Pueraria lobata* (Willd.) Ohwi var.
montana (Lour.) Maesen, Krings 531 (NCSC)

**Rhynchosia difformis* (Elliott) DC., Krings 509
(NCSC)

**Trifolium arvense* L., Krings 458 (NCSC)

**Wisteria sinensis* (Sims) Sweet, R. Paris s.n. (NCSC)

FAGACEAE

Quercus falcata Michx., Krings 537 (NCSC)
**Quercus hemisphaerica* W. Bartr. ex Willd., Krings
518 (NCSC)
Quercus stellata Wangenh., Krings 516 (NCSC)

GERANIACEAE

**Geranium carolinianum* L., Krings 477 (NCSC)

HAMAMELIDACEAE

Liquidambar styraciflua L., Krings 464 (NCSC)

LAMIACEAE

Teucrium canadense L., Krings 526 (NCSC)

LAURACEAE

Sassafras albidum (Nutt.) Nees, Krings 380 (NCSC)

LOGANIACEAE

Gelsemium sempervirens St. Hilaire, Krings 369
(NCSC)

MAGNOLIACEAE

Magnolia grandiflora L., Krings 485 (NCSC)

MORACEAE

Morus rubra L., Krings 475 (NCSC)

MYRICACEAE

Myrica cerifera L., Krings 387 (NCSC)

ONAGRACEAE

**Oenothera laciniata* Hill, Krings 455 (NCSC);
Krings 479 (NCSC)

OXALIDACEAE

Oxalis dillenii Jacq., Krings 478 (NCSC)

PASSIFLORACEAE

**Passiflora lutea* L., Krings 529 (NCSC)

PLANTAGINACEAE

**Plantago hookeriana* Fisch. & C.A. Mey. var. *nuda*
(A. Gray) Poe, Krings 454 (NCSC)
**Plantago psyllium* L., Krings 457 (NCSC)

POLYGONACEAE

Polygonum hydropiperoides Michx., Krings 552
(NCSC); Krings 553 (NCSC)

PYROLACEAE

Chimaphila maculata (L.) Pursh, *Krings* 372 (NCSC)

ROSACEAE

Amelanchier canadensis (L.) Medic., *Krings* 375 (NCSC); *Krings* 381 (NCSC)

Rosa palustris Marshall, *Krings* 406 (NCSC)

Rubus trivialis Michx., *Krings* 476 (NCSC); *R. Paris* s.n. (NCSC); *Krings* 542 (NCSC)

RUBIACEAE

Cephalanthus occidentalis L., *Krings* 410 (NCSC)

Galium hispidulum Michx., *Krings* 370 (NCSC)

**Galium obtusum* Bigelow, *Krings* 519 (NCSC)

Mitchella repens L., *Krings* 484 (NCSC)

SALICACEAE

Salix caroliniana Michx., *Krings* 539 (NCSC)

SAURURACEAE

Saururus cernuus L., *Krings* 405 (NCSC)

SCROPHULARIACEAE

**Bacopa monnieri* (L.) Pennell, *Krings* 528 (NCSC)

**Linaria canadensis* (L.) Dum. Cours., McCall s.n. (NCSC)

SOLANACEAE

**Physalis walteri* Nutt., *Krings* 524 (NCSC)

VERBENACEAE

Callicarpa americana L., *Krings* 411 (NCSC)

VIOLACEAE

**Viola sororia* Willd., *Paris* s.n. (NCSC)

VITACEAE

Ampelopsis arborea (L.) Koehne, *Krings* 407 (NCSC)

Parthenocissus quinquefolia (L.) Planch., *Krings* 468 (NCSC)

DISCUSSION

Table 1 lists species apparently discovered for the first time from the Outer Banks or rediscovered after not having been seen by Stalter and Lamont (1997). The find of *Aristolochia serpentaria* (Aristolochiaceae) is rather interesting, although not altogether surprising as it is generally associated with mixed deciduous forests (Radford et al. 1968). As few examples of maritime deciduous forests remain in North Carolina, the species likely remains rare due to habitat availability on the Outer Banks. Although relatively common in the North Carolina Coastal Plain, *Tragia urens* has been previously reported for the Outer Banks only by Burk (1961). Stalter and Lamont (1997) did not mention the taxon and presumably did not observe it. It remains unknown whether the taxon persists on Bogue Banks as reported by Burk (1961). *Celastrus orbiculatus* and *Pueraria lobata* var. *montana* have been weeds of concern to the preserve staff and efforts are underway to severely control, if not eradicate, them from the site.

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TABLE 1. Newly discovered or rediscovered taxa for the Outer Banks.

Taxa	Burk (1961)	Stalter & Lamont (1997)	Present study
Aristolochiaceae			
<i>Aristolochia serpentaria</i>	Not listed	Not listed	Vouchered from NHWEP
Celastraceae			
<i>Celastrus orbiculatus</i>	Not listed	Not listed	Vouchered from NHWEP
Euphorbiaceae			
<i>Tragia urens</i>	Reported from Bogue Banks	Not listed	Vouchered from NHWEP
Fabaceae			
<i>Desmodium nuttallii</i>	Not listed	Not listed	Vouchered from NHWEP
<i>Pueraria lobata</i> var. <i>montana</i>	Reported from Nagshead	Listed as not recently observed	Vouchered from NHWEP
Plantaginaceae			
<i>Plantago hookeriana</i> var. <i>nuda</i>	Not listed	Not listed	Vouchered from NHWEP
Smilacaceae			
<i>Smilax smallii</i>	Not listed	Not listed	Vouchered from NHWEP

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